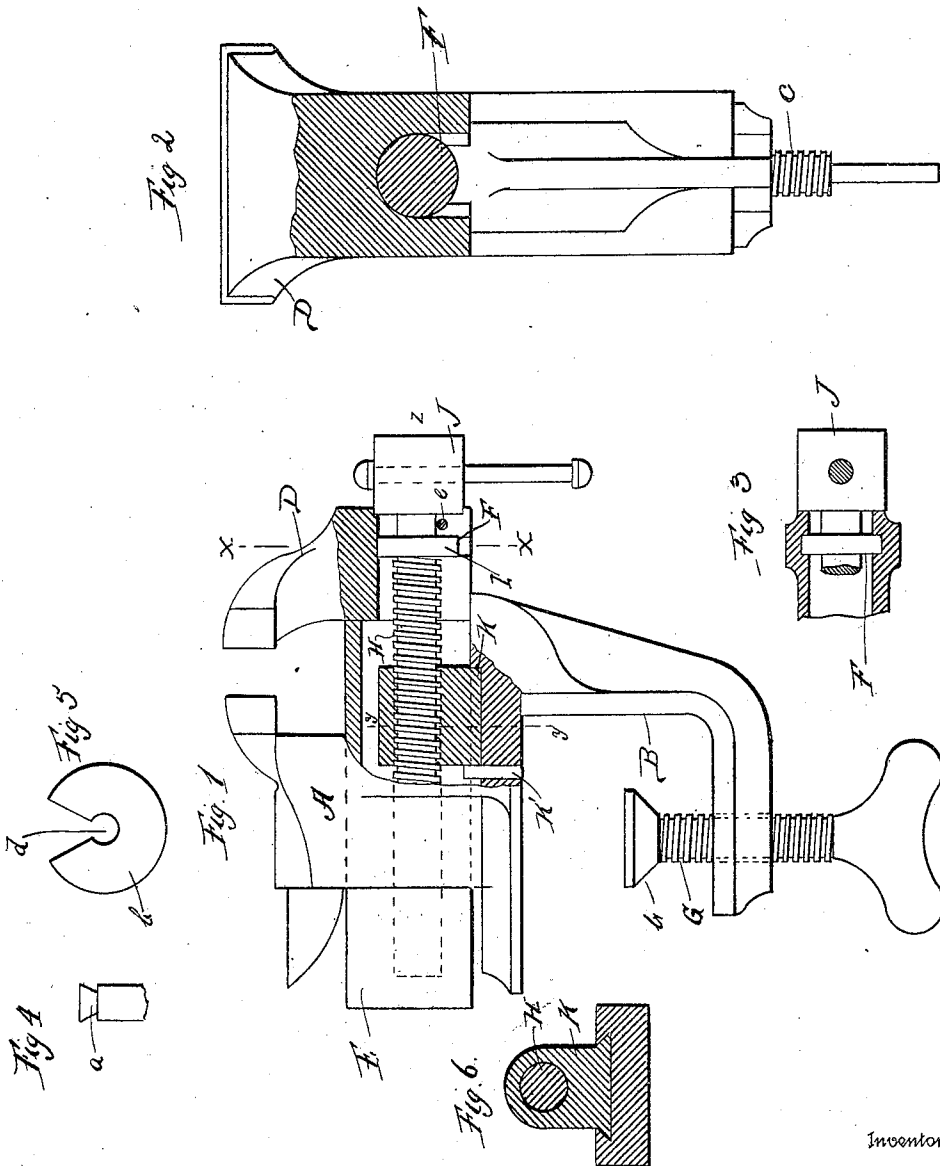


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J. G. BAKER.
BENCH VISE.

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JOSEPH G. BAKER, OF PHILADELPHIA, PENNSYLVANIA.

BENCH-VISE.

No. 877,695.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH G. BAKER, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Bench-Vises, of which the following is a specification.

My invention relates to a new and useful improvement in bench vises, and has for its object to provide an exceedingly simple and effective arrangement by which the operating screw of such a vise may be assembled in its proper position relative to the movable jaw and tail-block without the use of movable plates or screws, and a further object of my invention is to so construct the clamp screw and clamp of a vise that the latter may be swiveled upon the former by bending it around the shank thereof.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1 is an elevation of a vise made in accordance with my improvement, a portion thereof being broken away and sectioned to clearly show the operating screw in its assembled position. Fig. 2, a section at the line $x-x$ of Fig. 1. Fig. 3, a section of a portion of the movable jaw. Fig. 4, a detail view of a portion of the clamp screw, the clamp being removed. Fig. 5, a similar view of the clamp before it is bent around the shank of the screw. Fig. 6 is a sectional view showing the attachment of the nut to the stationary jaw.

In carrying out my invention as here embodied, A represents the body of the vise, which may be of any suitable design and adapted to be secured to the bench in any suitable manner, the means here shown for that purpose consisting of a depending bracket B and the clamp screw C threaded therethrough. The upper end of the clamp screw has a shank a formed thereon which is larger at the top than at the bottom, as clearly shown in Fig. 4, and around this

shank is swiveled the clamp b , which latter is made of malleable metal having a button hole slot d formed therein as shown in Fig. 5, so that to assemble the clamp and screw it is only necessary to place the former around the latter and bend it sufficiently to close the button hole slot; thus leaving the clamp swiveled upon the shank.

D represents the movable jaw, with which is formed the tail-block E, and in the base of this jaw is formed a slot or groove F, in which the shank G of the operating screw H is adapted to fit, the lower portion of said groove being open in order that the shank may be set within this groove or slot.

I is a collar carried by the operating screw, adapted to fit in the enlargement of the slot F and held in place by the pin e , while J represents the head of the operating screw, which is adapted to bear against the outer surface of said base, thus preventing the operating screw from having any longitudinal movement independent of the movable jaw. The nut K is secured upon the stationary jaw by means of the pin K' , so that the tail-block may slide thereover and the operating screw be threaded therein by which the jaw D is moved back and forth in the usual manner. It is to be noted that the nut K is set considerably forward in order that the jaw D may be opened to a greater extent than is usual and also to better support the operating screw and prevent it from sagging down at the front end.

If found desirable the pin e may be set just beneath the shank G of the operating screw so as to further prevent any sagging of this operating screw at its outer end.

By my improvement considerable time and annoyance is saved in the assembling of a vise of this description, since it is only necessary to place the shank G within the slot F and slide the tail-block into place sufficient to start the end of the operating screw in the nut K.

Having thus fully described my invention, what I claim as new and useful, is—

1. A movable jaw having formed in the base thereof a channel, an operating screw which is adapted to fit within said channel a collar and a head integral with said screw said channel provided with grooves for the reception of said collar and head, a pin located in said jaw and extending transversely

of the channel beneath the screw and upon which the screw is adapted to rest as specified.

2. In combination a stationary jaw, a nut
5 secured therein, a tail block adapted to slide over said nut and provided with a jaw, the base of said jaw having a channel therein and countersunk grooves on the sides of said channel, a screw adapted to thread into the
10 nut, a shank provided with an integral collar formed with said screw and adapted to engage with said countersunk grooves in the base of the jaw, a head formed with the outer end of the screw and adapted to bear against
15 the base, and a removable pin located in the

base of the jaw and transversely of the channel beneath the shank of the screw and between the collar and head thereof.

3. In a vise of the character described, a clamp screw provided with a tapered end 20 and a swiveled clamp thereon said clamp consisting of a frusto-conical split annulus of sheet metal.

In testimony whereof, I have hereunto affixed my signature in the presence of two 25 subscribing witnesses.

JOSEPH G. BAKER.

Witnesses:

GEO. CUNNINGHAM,
PHILIP J. LEAVENS.